

CORNELL  
UNIVERSITY

## STATION NEWS

GENEVA  
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## BRIEFS

## TELEX TO BE DISCONTINUED

Due to the cost of continuing Telex service, and the fact that it has not been used since 1993, the service will no longer be offered at Geneva. "E-mail and fax are now worldwide and obvious alternatives," noted John Barnard, who advised that the service be dropped.

Some letterhead and business cards may need to be revised.

PUBLISHER TO VISIT  
GENEVA CAMPUS

Mr. Tim Hardwick of CAB International will be on the Geneva campus Thursday, April 25, and is interested in meeting staff who have views about the scope for new books or any ideas for writing or editing a new book for the future. Dick Robinson, Horticultural Sciences, currently has a book in production with CAB International.

CAB International is an intergovernmental, not-for-profit organization providing services worldwide to agriculture, forestry, human health and the management of natural resources. It produces the CAB ABSTRACTS Database and 40 associated journals, and publishes approximately 50 new books per year aimed at the student, research and professional market.

If you are interested in meeting with Mr. Hardwick on April 25, contact Dona Soper at x234.

ARBOR DAY CEREMONY  
PLANNED

The Geneva Arboretum Association, in conjunction with the Director's office, is hosting an Arbor Day ceremony on Arbor Day, April 26, 1996, at *(Continued on page*

## "A VIABLE ALTERNATIVE TO PESTICIDES"

Wendell L. Roelofs delivered the banquet address Thursday night for the Cornell Community Conference on Biological Control at the Statler Inn in Ithaca. Using pesty examples from tomatoes, grapes, apples, cotton, turf and cypress in a multimedia presentation of slides and video clips entitled, "Sex Pheromones in Biobased Methods of Insect Control," Roelofs addressed the question, "Are pheromones worthwhile?"

Roelofs, the Liberty Hyde Bailey Professor of Insect Biochemistry and chairman of the Entomology Department at Geneva,

cited statistics from applications in the United States, Europe, and Mexico to demonstrate that "commercial manipulation" of the chemical communication system that female insects use to attract mates is, "indeed, a very effective tool for biocontrol." Acknowledging that a strictly "classical" definition of biocontrol refers only to using beneficial insects to prey on insect pests, Roelofs showed that biocontrol has already been expanded in research labs and the field to include pheromone-based behavior modification.

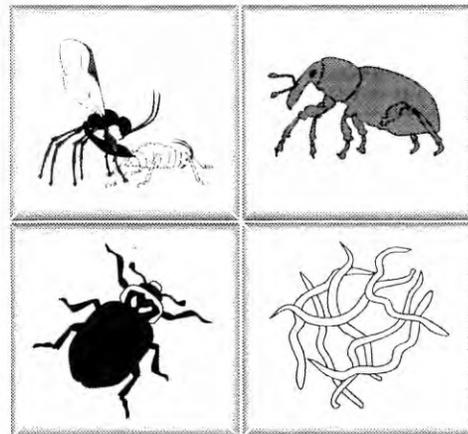
Come-hither chemicals called "pheromones" are emitted by female insects, carried over great distances in "pheromone plumes," and picked up by extremely sensitive olfactory response systems in male antennae. In response, the male takes flight using the pheromone plume to activate its up flight to the odor source. Mating ensues, which results in thousands of new larvae feeding on the host crop.

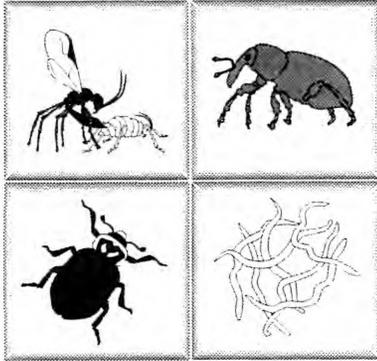
The driving force and financial backing for much of the current research is due to the potential use of synthetic pheromone chemicals in pest control programs. Because a particular pheromone is so species specific, it can be used as "bait" in "monitoring" or "eradication traps," and in "pheromone rings, ties, fibers, and hollow tubes" to "disrupt mating" and "disperse beneficial predators," explained Roelofs. Pheromones are a viable alternative to insecticides.

Roelofs' research efforts at the Agricultural Experiment Station focus on chemical analyses of pheromone components. His identification and synthesis of a series of sex pheromones from such species as the Oriental fruit moth, the codling moth, the tomato pinworm, the peach twig borer, and the European corn borer, together with the then novel approach of using electroantennogram bioassays, led to the development of the biocontrol of insects as an alternative to pesticides.

Pheromone chemistry analysis has come a long way since the 1970s when Roelofs was a young researcher, eye glued to the microscope, snipping thousands of little glands from the posteriors of leafrollers. In particular, researchers have improved the instrumentation. "Capillary gas chromatographs are used to isolate chemical compounds; collection systems have improved immeasurably with the development of 'butt suckers'; electroantennogram detectors on gas chromatographs reveal active components in messy mixtures; and flight tunnels are used to measure the male behavioral responses."

Roelofs demonstrated one of the newest tools in the insect behavior modification arsenal—a device called a spritzer, developed by Dr. Tom Baker at *(Continued on page 2)*





## CONFERENCE ON BIOLOGICAL CONTROL A SUCCESS

The Cornell Community Conference on Biological Control held at the Biotechnology Building on the Ithaca campus from April 11-13, attracted nearly 200 attendees, including some from other states, Europe, and Latin America.

"The conference was truly successful in bringing together the Cornell Community to discuss issues important to the future of biological control and to highlight some of the exciting work that is currently being done, especially at Cornell," said conference organizer Tony Shelton, Professor of Entomology at the Experiment Station.

Those in attendance were treated to presentations from national and international leaders in biological control, including Dr. Jeff Waage, head of the International Institute of Biological Control headquartered in England, and Dr. Ernest Delfosse, director of the National Biological Control Institute in Washington. Approximately 20 formal presentations and 40 posters were presented during the two main days of the conference.

"Panel discussions on the risks associated with the release of biological control agents invoked lively participation by environmentalists and those involved in genetic engineering of viruses and transgenic plants and brought out technical and ethical questions about the management of pests of our food and fibre," said Shelton.

The attendees were also treated to examples of successful biological control programs including the ongoing ones presented by Dr. Tony Bellotti (Cornell PhD '74) who is now leader of the Pest and Disease Management Unit at CIAT in Columbia. The work by Bellotti and others on the cassava mealybug biological control program in South America helped in the management of this pest throughout Africa where cassava is a mainstay of people's diet (the biological control work on the cassava mealy bug in Africa resulted in last year's World Food Prize in Agriculture for Dr. Hans Herren).

Industry perspectives on the future of biological control technologies such as genetic engineered plants, viruses, and the mass rearing of natural enemies were presented by scientists from Monsanto and duPont, as well as smaller biological control companies like Biosys and Beneficial Insectary.

One of the highlights of the meeting was Friday's sessions on representative programs in biological control that are occurring at Cornell. Dennis Gonsalves provided an overview of his program on controlling plant viruses through pathogen-derived resistance, a program that grew out of the frustration with trying to control viruses through other means. In several parts of the world, this new technology has literally been the salvation for small scale growers. Gary Harman described his 20-year quest for finding, improving and commercializing *Trichoderma* for biological control of plant pathogens and provided the audience with a real life—and local—examples of the potential for commercializing biocontrol technologies. Jim Tette, the Director of the New York State IPM Program which, in addition to the Experiment Station, was one of several major sponsors of the conference, provided insight into the biological control activities that are presently being implemented in New York State such as the management of dairy flies through the release of parasites. Wendell Roelofs provided entertainment to about 65 people at the banquet with titillating tales about *research and commercialization* of pheromone products [see related story, p.1].

The Proceedings of the Conference will be published on the WWW within three months and should provide a record of discussions for those anyone who is interested.

As Shelton said, "The Cornell biocontrol community should take pride in its accomplishments for continuing to provide leadership in the use of living organisms applied against pests in our agricultural and natural resource settings."

(PESTICIDES, Cont.)

Iowa State University. Adoption of this reusable timer, which "spritzes" pheromones onto an evaporation pad at 15-minute intervals—but only during the few critical hours each night when males and females are mating—could dramatically decrease the cost of pheromone mating disruption programs. Few farmers will argue with the incentive of cost savings.

Roelofs concluded his talk with these indisputable facts: pheromones have been identified from over 1,000 species of insects; in commercial agriculture, turf, and landscapes, where they play a major role in Integrated Pest Management (IPM) programs, pheromones are used to monitor pest populations of 250 species. Commercially they have been used successfully to disrupt the mating of more than 20 species. Disruption is particularly effective in control programs for pink bollworm, Oriental fruit moth, tomato pinworm, lightbrown apple moth, the codling moth, the peach twig borer, and the European grape berry moth.

(BRIEFS, Cont.)

2) 3:30 PM. All Station staff are invited to attend. This year, as in other years, the annual event will be held on the site of the tree being planted, in this case, at the southern Station entrance on Pre-emption road. A Japanese Zelkova has been selected for the site which has nice fall color to enhance this entrance. The Zelkova, which is a member of the Ulmaceae or Elm family, is native to Japan and was introduced into the United States in 1862. It is a fast-growing deciduous tree which, upon maturity, reaches 90-100 ft and is vase-shaped with a rounded top. It grows well over a wide pH range, is tolerant of wind and will withstand drought conditions. It also tolerates air pollution and soil compaction. The Zelkova is a handsome shade tree with the growth habit of the American Elm but is highly resistant to Dutch Elm disease and bark beetles. Director Jim Hunter will be the keynote speaker. Many thanks to the Director's Office and the Arboretum Association for funds for the tree purchase, and to the greenhouse and grounds crew for their work in site preparation and planting. Please join us in the celebration!





**HEALTH CORNER**

**More Blue Choice Changes**

Blue Choice has expanded its coverage to allow women under 65 two visits each year for gynecological examinations either by their Primary Care Physician (PCP) or their selected Obstetrician/Gynecologist (OB/GYN). In 1995, New York State law was changed, mandating coverage for biannual gynecological examinations.

A female enrollee shall have unrestricted access to primary and preventive obstetric and gynecological services from a qualified provider from within the HMO. That provider may be the OB/GYN designated as an alternate PCP. Two examinations are allowed annually for such services.

A female enrollee shall have unrestricted access to this alternate PCP provider of OB/GYN services for any care related to pregnancy.

The HMO shall not limit direct access to the enrollee's chosen qualified provider for primary and preventive OB/GYN services required as a result of such annual examinations or as a result of an acute gynecological condition. However, the qualified provider must discuss such services and the treatment plan with the enrollee's PCP in accordance with the requirements of the HMO.

**NOTICE**

**Woodchuck hunters are going to be implementing the Small Mammal Control Policy, starting April 22. Any questions, concerns, or comments, please contact Mark Scott, X296.**



*"Spring rides no horses down the hill,  
But comes on foot, a goose girl still  
And all the loveliest things there be  
Come simply so, it seems to me."*

—EDNA ST. VINCENT MILLAY—

**YOU CAN MAKE SUCCESS STORIES POSSIBLE THROUGH THE 1996 UNITED WAY CAMPAIGN**

It is tough to think about taking a payroll deduction in years when there are no salary increases and the cost of living keeps increasing. Despite this situation, employees at the Experiment Station generously contributed \$17,373 to the UNITED WAY in 1995. This is an excellent demonstration that we are concerned about our community and supporting the Health and Human Service Agencies associated with the United Way. It is important that we continue to remember those who are less fortunate than ourselves. For the 1996 campaign, I am requesting that individuals who have contributed in the past continue to do so, and those who did not make a pledge last year consider doing so this year. A pledge of 50 cents or a dollar from each paycheck will hardly be missed, but will go a long way to help children or families who need assistance.

The United Way agencies offer a variety of services and programs that serve:



**United Way**

- Health and Safety Education
- Individual and family counseling
- Child sexual abuse assessment
- Services to victims of domestic violence
- Adult education programs
- Child care
- Services for individuals with developmental, physical and mental disabilities
- Disaster relief
- Drug/substance abuse services
- Health education, training and counseling
- Home health care
- Legal services
- Social development and recreation programs for youth

If you are concerned about specific agencies, you can select from the list of 225 agencies in the Greater Rochester Area—or you can choose agencies where you do not want your gift to go.

Ontario County has over 1500 volunteers working on this campaign, which explains why the United Way can turn over 92% of all proceeds to the agencies. The United Way uses local dollars to provide local services, as allocated to the agencies by local volunteers. Although this is a time of anxiety for all of us with budgets being cut at all levels, I once again want to say that the Experiment Station has been a major force in the United Way for many years and I hope that everyone can find something to contribute, no matter how small it is.

The unit captains this year are:

- |                        |                                 |
|------------------------|---------------------------------|
| <b>Administration</b>  | Charie Hibbard, Bob Seem        |
| <b>B&amp;P</b>         | Dave Lasher                     |
| <b>Comm. Serv.</b>     | Sandy Antinelli                 |
| <b>Computer Serv.</b>  | Patty Gibbs                     |
| <b>Entomology</b>      | Nancy Staton                    |
| <b>Field Res. Unit</b> | Peter Griner                    |
| <b>Food Science</b>    | David Kidd                      |
| <b>Hort. Sciences</b>  | Julie Kikkert, Kristen Ondik    |
| <b>IPM</b>             | Margaret Cowles                 |
| <b>PGRU</b>            | Sherrie Tennies                 |
| <b>Plant Path.</b>     | Wolfram Koeller, Janice Valerio |

May I remind you that the deadline for returning pledge cards is April 26. Thank you for your cooperation and generosity in contributing to the 1996 UNITED WAY CAMPAIGN and our community.

*Hugh Price*  
1996 UNITED WAY, Chair

# THIS WEEK'S CALENDAR

APRIL 19-26, 1996

## EVENTS • MEETINGS

**Monday, April 22, 6:30 pm**  
Staff Room, Jordan Hall  
*English as a Second Language*

**Tuesday, April 23, 10:30 am**  
A-133, Barton Lab  
*Safety Committee Meeting*

**Wednesday, April 24, 3:00 pm**  
Director's Office, Jordan Hall  
*Research Department Chairs' Meeting*

**Thursday, April 25, 6:30 pm**  
Staff Room, Jordan Hall  
*English as a Second Language*

## SEMINARS

### SAGES

**Date:** Monday, April 22  
**Time:** 10:30 am  
**Place:** Auditorium, Jordan Hall  
**Speaker:** Professor Gerhard Sontert  
Harvard University  
**Topic:** *Gender in Science Career*

### PLANT PATHOLOGY

**Date:** Tuesday, April 23  
**Time:** 3:00 pm  
**Place:** Room A133, Barton Laboratory  
**Speaker:** Fuh-Jyh Jan  
Department of Plant Pathology, Geneva  
**Topic:** *Post-transcriptional gene silencing: Possible mechanism of resistance for tomato spotted wilt and squash mosaic viruses*



*Aerobics at the Sawdust Cafe*

beginning at 12:10 pm every Monday, Wednesday and Friday. Everyone is welcome! No sign-up necessary.

## CLASSIFIED

**CAR NEEDED:** Visiting scientist is looking for a reliable, low cost car. Must be automatic and prefer compact. Call Armando Quintero-Ramos at ext. 278 or at 781-6148.

**FOR SALE:** Saxophone. Purchased new in 1987 for \$800—will sell for \$500. Great condition. Call Emlyn Ward at x292.



## April Showers...May Flowers

With the help of April showers and the Geneva Arboretum Association, the campus will soon be in full bloom with many new flowering bulbs. The bulbs, some 1400 in number, were purchased by the group in the fall of 1995 and planted by the Station's greenhouse and grounds crew. They are now emerging in many locations all over campus. Areas to watch include the front areas of Jordan, Sturtevant, and Hedrick Halls, IPM, Barton Lab and FST. Other key areas are Farm Services, the Rock Garden, B&P, the HS greenhouses, the pinetum monument on the

corner of North and Pre-emption roads, and circling various stop signs, lamp posts and gate posts around the campus.

Flowers to be seen include Darwin, multiflora, Kaufmaniana and botanical tulips, snow drops, winter aconite, miniature narcissus, hyacinths, daffodils, crocus, guinea hen flower and rock garden iris. Enjoy!

If you have any suggestions for further additions and/or locations please let us know. The association is open to the entire Station family and meets one Wednesday a month at noon to plan and help implement Station grounds' improvements such as tree and shrub planting and area renovations. For more information, contact Martin Goffinet, (x392), the group chairperson, or any arboretum group member.

## 1996 MARCH OF DIMES WALK AMERICA

It's not too late to join other Station walkers in this year's March of Dimes Walk America. This year's 5-mile trek will be held Saturday, April 27, at the Seneca Lake State Park. It entails walkers obtaining contributions for their walking efforts that will be donated to the March of Dimes Campaign for Healthier Babies. The Station had a team that consisted of 10 very dedicated walkers last fall and organizers would like more to join them in the effort this year. The work is minimal and the walk is thoroughly enjoyable with goodies to eat afterwards. All employees and their relatives are eligible and welcome to join us. If you cannot walk but are interested in making a monetary contribution to our efforts, please contact Donna Roelofs or another walker. Walkers to date consist of Jeni Cooley (Ent), Kathy DeRosa (Admin), Holly King (Ent), Donna Roelofs (Ent), Joanne Schessl (Ent), Nancy Staton (Ent), Callie Musto (Ent), and Pim Larsson-Kovach (FST).

## SURPLUS VEHICLES FOR SALE

The following are being surplus by the Station. Minimum bid prices are given for each item. Sealed bids will be accepted in the Station Buildings and Properties Office until April 26, 1996, at 2:00 pm. Please be sure to include your name, campus telephone number, and department on each bid. The Station has the right to reject any or all bids.

1981 Chev. Suburban  
113,000 miles  
Ser. # G8EC16HXB110466  
Minimum Bid \$400  
License Plate # B51810

1971 Chev. C-50 Stake Truck  
98,000 miles  
Ser. # CE531P104425  
Minimum Bid \$1,000 w/hoist (in.op.)  
License Plate # A51056

1980 Chev. Pickup  
53,124 miles  
Ser. # CCD14A1144823  
Minimum Bid \$500 (needs clutch)  
License Plate # B68169

1973 Ford F-600 Stake Truck  
52,775 miles  
Ser. # F60ECR03586  
Minimum Bid \$2000 w/hoist  
License Plate # B74969